



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/430,950

11/01/1999

HAJIME INOUE

450100-3247.

8020

20999

7590

03/16/2006

FROMMER LAWRENCE & HAUG
745 FIFTH AVENUE- 10TH FL.
NEW YORK, NY 10151

EXAMINER

SHELEHEDA, JAMES R

ART UNIT

PAPER NUMBER

2617

DATE MAILED: 03/16/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/430,950

Applicant(s)

INOUE ET AL.

Examiner

James Sheleheda

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 22-48 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 22-48 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 48 is rejected under 35 U.S.C. 102(e) as being anticipated by Shen et al. (Shen) (6,434,748).

As to claim 48, Shen discloses a method of supplying program information in a near video on demand system, comprising the steps of:

providing the same program information on time offset channels (Fig. 3; column 5, lines 35-55), said time offset being the same from channel to channel so that the start time of said program information on one channel differs from the start time of said program information on another by said time offset (Fig. 3; column 5, lines 35-55); and

transmitting said program information simultaneously on a plurality of said time offset channels to a receiving station (Fig. 3; column 5, lines 35-55) so as to permit the recording of a segment of the transmitted program information in a buffer of the receiving station commencing from said start time (buffering the video as it is received; column 6, lines 17-52) and lasting no more than a predetermined duration that is less

than the duration of said program information (wherein the buffer continuously buffers and overwrites a small segment of the video; column 6, lines 24-53 and column 8, lines 39-57), and reading the recorded segment of program information while buffering the program information that is transmitted on the same channel as the segment of program information (column 6, lines 24-52 and column 7, lines 10-41),

wherein reading of said stored segment is paused in response to a pause command while the program information continues buffering (column 7, lines 10-43), and whereafter reading of said stored segment is resumed in response to a resume command (column 7, lines 10-43);

wherein a second channel, time-offset from said particular channel, is selected to supply the program information (column 8, lines 18-35) if a time difference between the pause command and the resume command is greater than said time offset (wherein an offset stream is selected to write to the buffer if the pause is greater than a segment length; see Fig. 3 and column 7, line 30-column 8, line 38).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 22-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shen in view of Garfinkle (5,530,754) (of record).

As to claim 22, Shen discloses a method of receiving program information supplied on plural time-offset channels in a near video on demand system (Figs. 3 and 4; column 5, lines 28-55), comprising the steps of:

selecting a particular channel (column 6, lines 7-23); and
receiving the program information supplied on said particular channel (column 6, lines 7-52);

wherein a second channel, time-offset from said particular channel, is selected to supply the program information (column 8, lines 18-35) if a time difference between the pause command and the resume command is greater than said time offset (wherein an offset stream is selected to write to the buffer if the pause is greater than a segment length; see Fig. 3 and column 7, line 30-column 8, line 38).

While Shen discloses storing program information in a buffer memory of a receiver in the near video on demand system (buffering of a program as it's received; column 6, lines 18-52), reading stored information while buffering the program information supplied on said particular channel in response to the selection of the particular channel (buffering incoming video to allow trick-play; column 6, lines 17-53); and wherein reading of said stored information is paused in response to a pause command while the program information continues buffering (column 7, lines 10-62), and whereafter reading of said stored segment is resumed in response to a resume command (column 7, line 44-column 8, line 57), he fails to specifically disclose storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information.

In an analogous art, Garfinkle discloses a video distribution system (Fig. 1; column 2, lines 39-57) wherein a lead-in portion of a video is stored in a memory of a receiver (site catalog store, 22; column 4, lines 13-26 and column 4, line 66-column 5, line 3) and wherein the stored lead-in is read while buffering program information (Fig. 5; column 4, lines 13-26 and column 4, line 66-column 5, line 9) in response to the selection of said particular program (column 4, line 66-column 5, line 9) for the typical benefit of allowing the display of the movie to begin immediately (column 4, line 17-21 and column 1, lines 63-67).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Shen's system to include storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information, as taught by Garfinkle, for the typical benefit of allowing the display of the movie to begin immediately.

As to claim 23, Shen and Garfinkle disclose wherein said time-offset is equal to the difference between a start time at which said program information is transmitted on one channel and the start-time at which the same program information is next transmitted on another channel (see Shen at Fig. 3 and column 5, lines 35-55).

As to claim 24, Shen and Garfinkle disclose wherein said program information supplied on said particular channel is buffered by writing said program information into a storage device (see Garfinkle at column 5, lines 3-9 and Shen at column 6, lines 17-53)

and reading said program information from said storage device (see Garfinkle at column 5, lines 3-9 and Shen at column 6, lines 17-53), said reading of said program information commencing after said stored segment of said program information has been substantially fully read (see Garfinkle at column 4, lines 19-34), thereby seamlessly reading said program information (see Garfinkle at column 4, lines 19-34).

As to claim 25, Shen and Garfinkle disclose wherein said stored segment exhibits a time duration (see Garfinkle at column 4, lines 19-34) substantially equal to the duration of said time offset (see Garfinkle at column 4, lines 21-26 and Shen at column 8, lines 43-53).

As to claim 26, Shen and Garfinkle disclose wherein said one channel over which said segment is supplied (see Garfinkle at Fig. 1; column 3, lines 6-49) and said particular channel over which the buffered program information is supplied (see Shen at column 6, lines 17-52 and column 7, lines 10-43) is supplied are the same (see Garfinkle at Fig. 1; column 4, lines 13-35 and column 4, line 66-column 5, line 9 and see Shen at column 6, lines 17-52 and column 7, lines 10-43).

As to claim 27, Shen and Garfinkle disclose wherein the same program information is supplied simultaneously on said plural time-offset channels (see Shen at Fig. 3 and column 5, lines 35-55), and wherein the program information that is supplied on said one channel commencing at the start time of said program information and

continuing until said particular channel is selected constitutes said segment that is stored (wherein the lead-in constitutes the starting portion of the movie; see Garfinkle at column 4, lines 13-34 and Shen at Fig. 3 and column 5, line 56-column 6, line 23).

As to claim 28, Shen and Garfinkle disclose wherein said stored segment of said program information is read out when said one channel is selected as said particular channel (read out when the particular movie is selected; see Garfinkle at column 4, lines 13-26 and Shen at Fig. 3 and column 5, line 56-column 6, line 23).

As to claim 29, Shen and Garfinkle disclose wherein said program information is a video program (see Shen at column 5, lines 28-55).

As to claim 30, Shen discloses an apparatus for receiving program information supplied on plural time-offset channels in a near video-on-demand system (Figs. 3 and 4; column 5, lines 28-55), comprising the steps of:

a channel selector (controller, 56) for selecting a particular channel (column 6, lines 7-23) and for receiving the program information supplied on said particular channel (column 6, lines 7-52);

wherein a second channel, time-offset from said particular channel, is selected to supply the program information (column 8, lines 18-35) if a time difference between the pause command and the resume command is greater than said time offset (wherein an

offset stream is selected to write to the buffer if the pause is greater than a segment length; see Fig. 3 and column 7, line 30-column 8, line 38).

While Shen discloses storing program information in a buffer memory of a receiver in the near video on demand system (buffering of a program as it's received; column 6, lines 18-52), a readout device (selector, 54; column 6, lines 37-43) for reading out stored information while said buffer is buffering the program information supplied on said particular channel in response to the selection of the particular channel (buffering incoming video to allow trick-play; column 6, lines 17-53); and wherein reading of said stored information is paused in response to a pause command while the program information continues buffering (column 7, lines 10-62), and whereafter reading of said stored segment is resumed in response to a resume command (column 7, line 44-column 8, line 57), he fails to specifically disclose a storage device for storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information.

In an analogous art, Garfinkle discloses a video distribution system (Fig. 1; column 2, lines 39-57) wherein a lead-in portion of a video is stored in a memory of a receiver (site catalog store, 22; column 4, lines 13-26 and column 4, line 66-column 5, line 3) and wherein the stored lead-in is read while buffering program information (Fig. 5; column 4, lines 13-26 and column 4, line 66-column 5, line 9) in response to the selection of said particular program (column 4, line 66-column 5, line 9) for the typical benefit of allowing the display of the movie to begin immediately (column 4, line 17-21 and column 1, lines 63-67).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Shen's system to include storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information, as taught by Garfinkle, for the typical benefit of allowing the display of the movie to begin immediately.

As to claim 31, Shen and Garfinkle disclose wherein said time-offset is equal to the difference between a start time at which said program information is transmitted on one channel and the start-time at which the same program information is next transmitted on another channel (see Shen at Fig. 3 and column 5, lines 35-55).

As to claim 32, Shen and Garfinkle disclose wherein said buffer buffers the program information received on said particular channel by writing the received program information into a memory (see Garfinkle at column 5, lines 3-9 and Shen at column 7, lines 10-62),) and thereafter reading said program information from said memory (see Garfinkle at column 5, lines 3-9 and Shen at column 7, lines 10-62), the received program information being read from said memory once said stored segment of program information has been substantially fully read out from said storage device (see Garfinkle at column 4, lines 19-34), thereby seamlessly recovering substantially all of said program information regardless of when said particular channel is selected (see Garfinkle at column 4, lines 19-34).

As to claim 33, Shen and Garfinkle disclose wherein said buffer includes a hard disk drive (see Shen at column 6, lines 24-27).

As to claim 34, Shen and Garfinkle disclose wherein said storage device includes said hard disk drive (see Garfinkle at column 3, lines 14-19 and Shen at column 6, lines 24-27).

As to claim 35, Shen and Garfinkle disclose wherein said hard disk drive includes write and read circuits operable at the same time to write and read from the hard disk drive concurrently (see Garfinkle at column 3, lines 14-19, column 4, lines 13-34 and column 4, line 66-column 5, line 9 and Shen at column 6, lines 24-52).

As to claim 36, Shen and Garfinkle disclose wherein said stored segment exhibits a time duration (see Garfinkle at column 4, lines 19-34) substantially equal to the duration of said time offset (see Garfinkle at column 4, lines 21-26 and Shen at column 8, lines 43-53).

As to claim 37, Shen and Garfinkle disclose wherein said one channel on which said segment is supplied (see Garfinkle at Fig. 1; column 3, lines 6-49) and said particular channel on which said program information is received (see Shen at column 6, lines 17-52 and column 7, lines 10-43) are the same (see Garfinkle at Fig. 1; column

4, lines 13-35 and column 4, line 66-column 5, line 9 and see Shen at column 6, lines 17-52 and column 7, lines 10-43).

As to claim 38, Shen and Garfinkle disclose wherein the same program information is supplied simultaneously on said plural channels (see Shen at Fig. 3 and column 5, lines 35-55), and said segment is formed by storing said program information on one channel commencing at said start time (see Garfinkle at column 4, lines 13-34 and Shen at Fig. 3 and column 5, line 35-column 6, line 24) and then, if said particular channel is not selected by the time the start time of said program information on said another channel is reached, replacing the stored segment of program information in said storage device with the program information supplied on said another channel (downloading new information for available movies; see Garfinkle at column 3, lines 6-49).

As to claim 39, Shen and Garfinkle disclose wherein said read out device commences the read out of said stored segment of program information when said particular channel is selected (read out when the particular movie is selected; see Garfinkle at column 4, lines 13-26 and Shen at column 6, lines 17-24).

As to claim 40, Shen and Garfinkle disclose wherein said program information is a video program (see Shen at column 5, lines 28-55).

As to claim 41, while Shen discloses a method of receiving program information in a near video on demand system (Figs. 3 and 4; column 5, lines 28-55), comprising the steps of:

storing program information in a buffer memory of a receiver in the near video on demand system (buffering of a program as it's received; column 6, lines 18-52),

reading stored information while buffering the program information which continues to be received (buffering incoming video to allow trick-play; column 6, lines 17-53);

wherein reading of said stored information is paused in response to a pause command while the program information continues buffering (column 7, lines 10-62), and whereafter reading of said stored segment is resumed in response to a resume command (column 7, line 44-column 8, line 57),

wherein a second channel, time-offset from said particular channel, is selected to supply the program information (column 8, lines 18-35) if a time difference between the pause command and the resume command is greater than said time offset (wherein an offset stream is selected to write to the buffer if the pause is greater than a segment length; see Fig. 3 and column 7, line 30-column 8, line 38), he fails to specifically disclose storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information.

In an analogous art, Garfinkle discloses a video distribution system (Fig. 1; column 2, lines 39-57) wherein a lead-in portion of a video is stored in a memory of a

Art Unit: 2617

receiver (site catalog store, 22; column 4, lines 13-26 and column 4, line 66-column 5, line 3) and wherein the stored lead-in is read while buffering program information (Fig. 5; column 4, lines 13-26 and column 4, line 66-column 5, line 9) in response to the selection of said particular program (column 4, line 66-column 5, line 9) for the typical benefit of allowing the display of the movie to begin immediately (column 4, line 17-21 and column 1, lines 63-67).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Shen's system to include storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information, as taught by Garfinkle, for the typical benefit of allowing the display of the movie to begin immediately.

As to claim 42, Shen and Garfinkle disclose wherein the received program information is buffered by writing said program information into a storage device (see Garfinkle at column 5, lines 3-9 and Shen at column 6, lines 17-53) and reading said program information from said storage device (see Garfinkle at column 5, lines 3-9 and Shen at column 6, lines 17-53), said reading of said program information commencing after said stored segment of said program information has been substantially fully read (see Garfinkle at column 4, lines 19-34), thereby seamlessly reading said program information (see Garfinkle at column 4, lines 19-34).

As to claim 43, while Shen discloses an apparatus for receiving program information in a near video-on-demand system (Figs. 3 and 4; column 5, lines 28-55), comprising the steps of:

a buffer (DSM, 50; column 6, lines 17-53) for buffering the program information which continues to be received in the apparatus storing program information in a buffer memory of a receiver in the near video on demand system (buffering of a program as it's received; column 6, lines 18-52),

a readout device (selector, 54; column 6, lines 37-43) for reading out stored information while said buffer is buffering said received program information (buffering incoming video to allow trick-play; column 6, lines 17-53);

wherein reading of said stored information is paused in response to a pause command while the program information continues buffering (column 7, lines 10-62), and whereafter reading of said stored segment is resumed in response to a resume command (column 7, line 44-column 8, line 57),

wherein a second channel, time-offset from said particular channel, is selected to supply the program information (column 8, lines 18-35) if a time difference between the pause command and the resume command is greater than said time offset (wherein an offset stream is selected to write to the buffer if the pause is greater than a segment length; see Fig. 3 and column 7, line 30-column 8, line 38), he fails to specifically disclose a storage device storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information.

In an analogous art, Garfinkle discloses a video distribution system (Fig. 1; column 2, lines 39-57) wherein a lead-in portion of a video is stored in a memory of a receiver (site catalog store, 22; column 4, lines 13-26 and column 4, line 66-column 5, line 3) and wherein the stored lead-in is read while buffering program information (Fig. 5; column 4, lines 13-26 and column 4, line 66-column 5, line 9) in response to the selection of said particular program (column 4, line 66-column 5, line 9) for the typical benefit of allowing the display of the movie to begin immediately (column 4, line 17-21 and column 1, lines 63-67).

It would have been obvious to one of ordinary skill in the art at the time of invention by applicant to modify Shen's system to include a storage device storing a segment of the program information supplied on one of said channels and reading said stored segment of program information while buffering said program information, as taught by Garfinkle, for the typical benefit of allowing the display of the movie to begin immediately.

As to claim 44, Shen and Garfinkle disclose wherein said buffer buffers the received program information by writing the received program information into a memory (see Garfinkle at column 5, lines 3-9 and Shen at column 6, lines 17-53) and thereafter reading said received program information from said memory (see Garfinkle at column 5, lines 3-9 and Shen at column 6, lines 17-53), the received program information being read from said memory once said stored segment of said program information has been substantially fully read out from said storage device (see Garfinkle

Art Unit: 2617

at column 4, lines 19-34), thereby seamlessly recovering substantially all of said program information (see Garfinkle at column 4, lines 19-34).

As to claim 45, Shen and Garfinkle disclose wherein said buffer includes a hard disk drive (see Shen at column 6, lines 24-27).

As to claim 46, Shen and Garfinkle disclose wherein said storage device includes said hard disk drive (see Garfinkle at column 3, lines 14-19 and Shen at column 6, lines 24-27).

As to claim 47, Shen and Garfinkle disclose wherein said hard disk drive includes write and read circuits operable at the same time to write and read from the hard disk drive concurrently (see Garfinkle at column 3, lines 14-19, column 4, lines 13-34 and column 4, line 66-column 5, line 9 and Shen at column 6, lines 24-52).

Response to Arguments

5. Applicant's arguments with respect to claims 22-48 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2617

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

7. The following are suggested formats for either a Certificate of Mailing or Certificate of Transmission under 37 CFR 1.8(a). The certification may be included with all correspondence concerning this application or proceeding to establish a date of mailing or transmission under 37 CFR 1.8(a). Proper use of this procedure will result in such communication being considered as timely if the established date is within the required period for reply. The Certificate should be signed by the individual actually depositing or transmitting the correspondence or by an individual who, upon information and belief, expects the correspondence to be mailed or transmitted in the normal course of business by another no later than the date indicated.

Certificate of Mailing

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to:

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

on _____.
(Date)

Typed or printed name of person signing this certificate:

Signature: _____

Registration Number: _____

Certificate of Transmission

I hereby certify that this correspondence is being facsimile transmitted to the United States Patent and Trademark Office, Fax No. () _____ - _____ on _____.
(Date)

Typed or printed name of person signing this certificate:

Signature: _____

Registration Number: _____

Please refer to 37 CFR 1.6(d) and 1.8(a)(2) for filing limitations concerning facsimile transmissions and mailing, respectively.

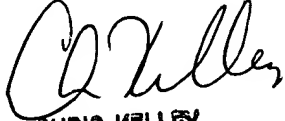
8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Sheleheda whose telephone number is (571) 272-7357. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James Sheleheda
Patent Examiner
Art Unit 2617

JS


CHRIS KELLEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600